

## Sustainable monument preservation in architectural education

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**ABSTRACT:** The aim of this article is both to present the need for changes in architectural and conservation education in a modern, rapidly changing world, as well as to outline solutions to this problem. In the modern world, the field of objects that one intends to protect is expanding. It is necessary to adapt the architectural education to these changes. Due to the current pace of social, political and natural changes, it is not possible to maintain the traditional model of architectural education, which is based on solutions previously developed, and on rigid models and academic theories. The student should be able to notice new and emerging problems of the surrounding world and solve them. Selected diploma works that were awarded in competitions organised by both European and Polish institutions are presented as exemplary solutions to this problem.

### INTRODUCTION

One of the important elements of architectural education is architecture conservation education. As with any other type of education, it should be based on theoretical foundations. However, these at present are undergoing significant changes. As Szmygin states:

*Conservation theory has a dynamic nature and, due to this, it must be continually adjusted and amended. As a result, new documents are added to the corpus of doctrinal texts, which are the basic form of expressing and codifying the conservation theory. There are, however, certain problems relating to these documents, i.e. their number is increasing, they are prepared by members of different circles, their rank is unclear, there is no obligation to adopt the recommendations provided in them, and their content may be incompliant with other texts. Due to this, the image of contemporary conservation theory projected by doctrinal texts is fragmented and difficult to present [1].*

Updated collections of texts on conservation doctrines are available, *inter alia*, on the International Council on Monuments and Sites Web site, on which in 2018 there were eight charters adopted by the General Assembly of the International Council on Monuments and Sites (ICOMOS), 19 ICOMOS resolutions and declarations, seven charters adopted by ICOMOS National Committees and five other international standards [2]. These documents were published between the years 1931 (*Athens Charter for the Restoration of Historic Monuments*) and 2017 (*Delhi Declaration on Heritage and Democracy*). However, this is not a complete file of conservation documents. It does not include some documents produced by international organisations such as UNESCO, e.g. *Convention Concerning the Protection of the World Cultural and Natural Heritage*, Paris 1972, *Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas*, Warsaw-Nairobi 1976 and *UNESCO Universal Declaration on Cultural Diversity*, Paris 2011.

The ICOMOS list does not include declarations adopted by local organisations and assemblies, such as *The Declaration of Amsterdam* adopted by the Congress on the European Architectural Heritage in 1975 and adopted by the Council of Europe: *Convention for the Protection of the Architectural Heritage of Europe*, Granada 1985; *European Landscape Convention*, Florence 2000; *Council of Europe Framework Convention on the Value of Cultural Heritage for Society*, Faro 2005; nor the *Cracow Charter 2000: Principles for Conservation and Restoration of Built Heritage*, Cracow 2000.

There are some common features in this multiplicity of contemporary documents. There is a clear tendency in the development of conservation doctrines to tie them more with the ideas concerning other aspects of human life than just the protection of monuments. These include the principles of environmental protection and sustainable development.

Statements regarding such connections began to appear in the 1970s. For example, in *Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas* from 1976, the following statement can be found:

*Every historic area and its surroundings should be considered in their totality as a coherent whole whose balance and specific nature depend on the fusion of the parts of which it is composed and which include human activities as much as the buildings, the spatial organization and the surroundings. All valid elements, including human activities, however modest, thus have significance in relation to the whole which must not be disregarded [3].*

In later documents the combination of conservation and sustainable development is increasingly clear. In Vienna Memorandum on *World Heritage and Contemporary Architecture - Managing the Historic Urban Landscape* from 2005 the following is stated: *...an integrated approach linking contemporary architecture, sustainable urban development and landscape integrity based on existing historic patterns, building stock and context [4].*

Another phenomenon noticeable in contemporary conservation theory and practice is the expansion of the set of objects that are considered worth preserving and protecting. The process of increasing the number of monuments protected by societies, local authorities, states and international organisations is proceeding at an unprecedented pace. For example in Hamburg, in the central part of the city (the districts of Hamburg-Mitte and Altona) where roughly more than half a million inhabitants reside, the list of monuments contains 702 buildings built after 1945 [5][6]. One of the youngest listed buildings in Hamburg is a residential building designed by David Chipperfield, built in 2010 in Hamburg Blankenese, at Bours Park 2.

Increasing the number of objects under conservation protection is associated with the rejection of the Western, Eurocentric concept of heritage protection, which has been ongoing since the 1990s. It presupposes that the unchanged material structure of an architectural object is of overriding value. The other idea, which is increasingly important, is the Far Eastern concept, which allows the changing of worn-out building elements [7][8].

In parallel, natural resources have been decreasing, and places or areas that can be extensively used have been disappearing. Economic needs force more rational use of existing resources. Adaptive reuse, which increasingly is important, is based on reusing sites or buildings for a purpose other than that for which they were designed or built. As Smallwood says, the greenest building is the one that is already built [9]. Simultaneously with the need to adapt buildings to new purposes there often appears a contradictory need to preserve the local identity as an important social issue [10][11].

## SUSTAINABLE DEVELOPMENT AND ADAPTIVE REUSE STUDENT PROJECTS

It is necessary to adapt the entire system of monument protection, including architectural education, to current needs. It is necessary to treat monument protection as one of the elements of sustainable development closely related to the issues of social development and also the protection of natural resources. Due to the current pace of social, political and natural change, it is not possible to maintain a traditional model of architectural education that was based on the development of solutions previously accepted, and on rigid models and academic theories. Students today must be able to recognise and solve new and emerging problems of the surrounding world.

Are these new tendencies noticeable in the education conducted in schools for prospective architects? Curricula published by the faculties of architecture all over the world contain statements regarding education in the spirit of sustainable development principles and teaching about adaptive reuse. However, curricula mostly are declarations that provide no actual answers and are not confirmation as to whether the educational institutions of architecture are keeping up with the needs of the modern world or whether the students are applying new solutions.

One method for examining this issue can be by the analysis of diploma projects. The completion of a diploma project is one of the most important stages in the education process. For research purposes, a representative group of projects should be selected. It was decided to examine the results of competitions for the best diploma projects. One competition with a relatively large subject range was the European Architectural Medal for Best Diploma Project. This competition was organised in 2015-17 by the University of Architecture and Urbanism Ion Mincu in Bucharest and the Architects' Council of Europe (ACE) - a representative organisation for the architectural profession at the European level. This consists of 46 regulatory and professional bodies from 32 European states (in 2018). The European Association for Architectural Education (EAAE), which associates 133 schools of architecture from 33 European states, was also involved in the competition organisation. Highly prestigious due to the involvement of the numerous members of professional institutions, the competition attracted works of students from top universities and schools throughout Europe.

Diploma works that were awarded first prize or received honourable mention were analysed in terms of whether they had applied principles of sustainable development and adaptive reuse. The analysis covered not only the projects themselves along with the description provided by the authors, but also the jury's judgement. Apparently, the awarded works had mostly met the challenges of the modern world. Most of them dealt with the adaptation of existing structures

with cultural value to new purposes. Some awarded examples include the 2016 project: *[Re]-Constructing Porto: The Massarellos School of Construction* by Michael Lewis from the University of Bath, United Kingdom, tutored by Alex Wright and Anne Claxton; and the 2017 project: *Negotiating the edge* (a proposal to reunite two parts of the divided city of Nicosia) by Andreas Prokopiou from the University of Nicosia, Department of Architecture, Cyprus, tutored by Maria Hadjisoteriou, Angela Petrou, Yiorgos Hadjichristou and Markella Menikou.

Table 1: Subjects for the European Architectural Medal for best diploma projects.

Year	European Architectural Medal for Best Diploma Project		Other prizes and honourable mentions in the EAAE competition	
	Works that included the elements of sustainable development and adaptive reuse	Works that did not include the elements of sustainable development and adaptive reuse	Works that included the elements of sustainable development and adaptive reuse	Works that did not include the elements of sustainable development and adaptive reuse
2015	0	1	5	1
2016	1	0	4	2
2017	1	0	4	3
Total	2	1	13	6

One disadvantage which hindered the use of results of the European Architectural Medal for Best Diploma Project for research purposes was the relatively short duration of the competition. Only three editions of the competition were held, and in 2018 its organisers decided to run the contest jointly with Fundació Mies van der Rohe, with the support of Creative Europe as an extension of the European Union Prize for Contemporary Architecture - the Mies van der Rohe Award. The competition is for the Young Talent Architecture Award (YTAA).

In 2018, four works received the YTAA, one of which was *The Bank of England: a Dialectical Project* by Loed Stolte from the Faculty of Architecture and the Built Environment, Delft University of Technology, The Netherlands. Critically inspired by John Soane's legendary *ruin-esque* Bank of England, the project explicitly engaged the architectural dialectics of ruin and construction. Another award work was *Perdido (Lost) - P.R.U.S. of Madrid. Plan of Recovery of the Underground Spaces of Madrid* by Julio Gotor Valcárcel from the Madrid School of Architecture of the Polytechnic University of Madrid, Spain. The purpose of the project was to recover the forgotten and latent landscape of the underground spaces and convert them into public spaces. The third work, *Deplorable Framework. The National Park Settlement Trust* by Matthew Gregorowski was carried out in the Cass Faculty of Art Architecture and Design, London Metropolitan University, United Kingdom. *Deplorable Framework* was a proposal for the holistic reinvention of the British countryside. The fourth award went to *Confluence. A Strategy for the Archaeological Excavations and Development of Convoys Wharf* by Joshua Penk from the Architectural Association School of Architecture, London, United Kingdom [12]. This was a project about the meeting of eras; it focused on the slowly exposed remnants of past dockyard structures, revealed by years of archaeology.

All of the projects awarded the YTAA included the elements of sustainable development and adaptive reuse. But as briefly mentioned above, the short duration of the European Architectural Medal for Best Diploma Project and its transformation into a competition carried out under other regulations did not allow changes to be studied in the awarded diploma projects.

The Zbyszko Zawistowski Diploma of the Year Award - a competition organised by the Association of Polish Architects - has a longer history. The award has been granted since 1964. During that time, the name of the prize and rules for winning had changed twice, but since 2001 the competition has been carried out under its current name on the basis of almost unchanging rules. It is organised by the most important professional organisation of architects in the country: the Association of Polish Architects (SARP) in co-operation with all Polish schools of architecture. Every year one first prize and between two and six honorary mentions are awarded. Deans of the Faculty of Architecture, tutors, reviewers and student authors have the prerogative to submit works in the first stage. The openness of this formula for submitting entries allows for the collection of a broader range of works from the academic community as a whole - including both academic teachers and students themselves.

The 17 years of this competition in its current format provided the possibility to examine changes in the subjects of awarded works and in the criteria for their evaluation over a longer period. The changes that occurred were significant. Until 2005, only one among 19 diploma projects which received the Zbyszko Zawistowski Award or Honorable Mention concerned adaptive reuse. The prizes were awarded primarily for the creation of new, original forms. In 2006, the main award went to *Torpedowaffenplatz* by Jakub Westrych, who was from the Faculty of Architecture at Warsaw University of Technology and tutored by Andrzej Miklaszewski. The project was for the adaptation of a World War II military structure located on the Gdańsk Bay. Since then, the number of works on the adaptation of existing structures has increased. In the years 2015-2017, all the works that received the main prize of the Zbyszko Zawistowski Diploma of the Year Award and a significant part of the honourable mentions considered these issues.

Table 2: Analysis of subjects: Zbyszko Zawistowski Diploma of the Year awards.

Prize for the year	Main prize		Honourable Mentions	
	Works that included the elements of sustainable development and adaptive reuse	Works that did not include the elements of sustainable development and adaptive reuse	Works that included the elements of sustainable development and adaptive reuse	Works that did not include the elements of sustainable development and adaptive reuse
2001		1		2
2002		1	1	2
2003		1		3
2004		1		4
2005		1		3
2006	1			3
2007		1	1	2
2008		1		3
2009		1	1	1
2010		1	2	1
2011		1	2	1
2012		1	4	1
2013		1	4	1
2014		1	2	3
2015	1		1	4
2016	1		2	2
2017	1		3	3
Total	4	13	23	39

#### AWARDED DIPLOMA WORKS FROM GDAŃSK UNIVERSITY OF TECHNOLOGY

In 2016, Jakub Grabowski's work *The Fading Architecture - the Architecture of Fading. The Palliative Care Centre with Behavioral Addictions Rehabilitation Facility* located in the ruins of an old monastery in the town of Otyń (see Figure 1) was among the works awarded the Zbyszko Zawistowski Diploma of the Year Award in the competition organised by the Association of Polish Architects.

It was also chosen among 30 projects on the shortlist of the European Architectural Award for the Best Diploma Project and won second prize in the LafargeHolcim Awards 2017 for Europe - Next Generation. This diploma project was carried out in the Department of History, Theory of Architecture and Monument Conservation of the Faculty of Architecture of Gdańsk University of Technology, under the supervision of Jakub Szczepański.

The author commented on the work:

*The project attempts to find an answer to the question as to whether it is possible to stop the progressive degradation of the historic monuments in Lower Silesia with the use of provisional methods of low-tech architecture. The second issue is the role of spiritual architecture in confrontation with the expectations and problems of the consumer society of the 21st Century. The common element for both issues is the topic of fading and the value of time. The project suggests restoring the historic character of the site and opting for provisional repair measures in the form of temporary constructions, which will enrich the historic object and complement it - creating a coherent whole. The key factor in revitalisation of the ruins is to bring back the users, and provide them with conditions in which to live. The building houses health care facilities, residential space and sacred space. The dying are supported by their families, the medical staff and priests; there they can find their peace, and also receive treatment (while infirm residents are served, the renovation can be worked on, and goods can be generated in the grange). Both the planned development of the site and the activities aiming at the restoration of the monastery are the factors that integrate the users of the building and the local community as well as positively affecting the attractiveness of the region. Consequently this leads to the process of revitalisation of the immovables and the town of Otyń, as well as greater identification of the residents with the location.*

In 2017, the Zbyszko Zawistowski Diploma of the Year Award went to Michalina Frątczak whose work, *On the Edge. Expansion and Adaptation of Sanctuary and Guesthouse for a Soothing Venue, Cabo Espichel, Portugal*, was carried out in the same department at Gdańsk University of Technology under supervision of the same tutor, Jakub Szczepański (see Figure 2). According to the author:

*The project is an answer to the constantly rushed pace of life and the never-ending flow of information with the simultaneous neglect of the essence of humanity. The author proposes the creation of a Soothing Venue for the people on the edge of a breakdown, both physically and emotionally. The project touches various issues of the adaptation of an historical complex and the implementation of a new building in an existing tissue without spoiling the identity of the place. In the course of the creative process there was a need to use such means of architectural expression that would just emphasise the austerity and aesthetic of the venue.*

Both of these awarded works are examples of a trend to integrate respect for the environment with respect for traces of the past. Both works prove that it is possible to accomplish adaptive reuse, together with making changes to objects of highly symbolic value, as in this case with an object having a former sacred function.



Figure 1: *The Fading Architecture - the Architecture of Fading*. Jakub Grabowski's diploma project, Gdańsk University of Technology, 2016.



Figure 2: *On the Edge. Expantion and Adaptation of Sanctuary and Guesthouse for a Soothing Venue*. Cabo Espichel, Portugal. Michalina Frątczak's diploma project, Gdańsk University of Technology, 2017.

## CONCLUSIONS

The subjects of diploma projects that have been receiving awards in recent years indicate that significant positive changes have taken place in the educational process in European schools of architecture. Students are being taught how

to consciously use the existing limited resources of the environment and space, as well as cultural goods. The issues of creating an original form, which some years ago had been the main focus of studies in numerous schools of architecture, have moved into the background.

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